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ADDRESSES

DELIVERED AT THE

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OF

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At a meeting of the President and Fellows of Middlebury College, September 4, 1838, Rev. JOHN HOUGH, then Professor of Languages in this College, was elected to the *Professorship of English Literature and Education;* and Mr. SOLOMON STODDARD, then Professor of Mathematics and Natural Philosophy, to the *Professorship of Languages.*

At the same meeting, Mr. ALEXANDER C. TWINING was appointed *Painter-Professor of Natural Philosophy, Mathematics and Civil Engineering;* and Mr. CHARLES B. ADAMS, *Burr-Professor of Chemistry and Natural History.*

ADDRESS,

BY PROF. S. STODDARD.

The intrinsic importance of education, its momentous influence on individual and national character and happiness, and its bearings on the destiny of the immortal spirit, render it a suitable and worthy theme for discussion on the present occasion. And the fact that, notwithstanding the experience of so many ages and all that has been written on the subject, great diversity of opinion on fundamental points still prevails, constitutes a reason why a public teacher should be explicit in a declaration of his views, and should endeavor to contribute what aid he can to form a correct public sentiment. In discharging the duty assigned me, I shall seek not novelty, but truth; not originality or brilliancy, but sound reason and common sense; and if what I shall say shall, in any degree, tend to confirm my hearers in correct principles, or convince them of their error, if they are in the wrong, I shall not have labored in vain.

Education has of late been often used to include all the influences which act on the body, mind or heart, and which go to form the man what he becomes. Many of these are accidental and unavoidable, and there seems to be no good reason for comprising them under this term. By education I understand the training of a human being by discipline, by instruction, and in general by an intelligent adaptation of means to the end designed. This is a vast field, extending from the commencement of existence to the full maturity of manhood, and involving an immense variety of important principles. On this wide range I do not propose to enter, but shall confine my remarks to what is called a *liberal education*—in other words, such an education as is professedly given in our Colleges, and is designed to constitute a foundation for professional, literary or scientific pursuits. Much that will be said, however, will be, to some extent, appli-

cable to every stage of education, especially to that which is designed as a preparation for a full course of study. Indeed every step has important relations to all that are to follow, and ultimate success is exceedingly dependent on early training and correct habits. No system, however excellent in itself, can fully supply the deficiencies of the past, or correct the aberrations of a wayward intellect or a perverse heart.

That a liberal education should be *thorough* as opposed to *superficial*, and *complete* as opposed to *partial*, will not, I suppose, be disputed. Assuming then the importance of a thorough and complete public education, I shall attempt to show *what such an education implies; how it may be acquired; and what are some of its valuable results.*

I. What is implied in a thorough and complete education?

1. It is obvious that it implies a due regard to the physical, intellectual and moral character.

Physical education is of immense consequence, because, if it is disregarded, the most disastrous results ensue not only to the body, but to the mind. This subject has been, and still is, strangely neglected in this country, in every class of society, but the effects of this neglect are oftenest seen in our educated young men. How many of these, even before their course of study is completed, are so enfeebled as to be unfitted for enjoyment or usefulness! How many find a premature grave, just as they are entering on active life! In how many more are paralyzed physical and intellectual powers the melancholy result of excessive or injudicious application! The efforts that have been made to prevent such evils have been attended with only partial success, and it would seem that nothing but bitter experience can induce the young to avoid the causes which produce them. Had I time, I think I could show that they are not the necessary consequences of a life of study. Among European scholars, we find no corresponding debility and premature decay; for among them the causes which produce these results are avoided by suitable exercise, and a due regard to the laws of our physical nature. The subject is worthy of most serious consideration. The plans which have been devised to secure the health of studious young men have generally failed, and experience seems to show that nothing but voluntary and persevering effort on their own part will be of any avail. If a student will neglect exercise, or indulge in food

or in habits of any kind that are injurious, if he will poison himself with alcohol or tobacco, he must sooner or later reap the bitter fruit of his folly. The teacher can only instruct, advise, warn and remonstrate. I will only add that so essential is this particular, that, without regard to it, such an education as we are considering cannot be acquired, and, if it could, it would be of little value to the student or the community.

Intellectual education is so obviously an important branch of the subject under consideration as hardly to need a remark in this place. Indeed it is my conviction that it has been made relatively too prominent; that the mind has been too exclusively the object of regard, while the physical frame and the moral powers have been neglected. Still, intellectual culture demands and deserves chief attention in a liberal education, because it is this which constitutes the essential difference between an educated and uneducated man.

It seems to have been taken for granted in education that the moral powers need little attention—that the moral feelings will somehow be developed and directed without express and careful cultivation; and though the most convincing proofs that this is an error are every where at hand, there is little indication of a change of sentiment on the subject. Moral influence is indeed regarded as important in the earlier stages of education, but (with the exception of religious instruction,) how little has it entered into the course of regular training in our higher institutions. When this subject shall receive the attention that it merits, when thorough and persevering efforts shall be made to form and regulate the habits of our educated youth, the happiest results may be expected. The experience of mankind, as well as the nature of man, abundantly evinces that intellectual culture, the highest attainments of genius, and the largest acquisitions of knowledge, have no necessary connection with moral worth, and so deplorable is the defect, where it exists, as to justify the most assiduous endeavors to remedy it in a course of education.

2. A thorough education implies the development and discipline of the faculties of the mind. This indeed is, in my view, the chief object of such an education. It is a law of our nature that exercise strengthens alike the physical and the intellectual powers. The faculties of the mind are not given to man in perfection; it is only by patient and persevering discipline that

they are brought to that degree of excellence of which they are capable. Like delicate instruments, they must be polished and sharpened, and the mind must be taught skilfully to handle and, use them. Without this ability, mere knowledge is comparatively valueless. Indeed the undisciplined mind, as its knowledge increases, only becomes the more conscious of its imbecility, and, like a ship heavily laden, but without rudder or pilot, it is the more exposed from the amount of its burden. The acquisition of knowledge is limited to the particular subjects investigated; the discipline of the mental faculties qualifies them for every kind of investigation. The one simply accumulates materials; the other confers the power of applying them to use. The one only gives access to certain apartments in the temple of science; the other furnishes a magic key, by which all the recesses of that temple may be explored, and a wand, which converts their stores into treasures of practical value.

This doctrine is generally admitted, yet I think its importance is not duly appreciated, and hence result many prevalent errors on the subject of education. The discipline of which we speak is slow and unseen in its operations; its results are perceptible only after a long time. It is, too, a painful and laborious process. The mere acquisition of knowledge, on the other hand, is easy and rapid; its fruits are obvious and striking. Hence an age, impatient of delay, and eager for results, is apt to undervalue that kind of education which places discipline before knowledge, and thus confers a power of rapid and universal improvement; while it admires and prefers the showy and superficial advantages of mere acquisition.

The discipline of which I speak should be universal and proportional; that is, it should extend to all the faculties, and be proportioned to their importance. The faculties were all conferred for valuable purposes, and should all be trained to their appropriate use. It is only when this is the case, that the advantages of discipline are fully realized. If one faculty or set of faculties predominates, the symmetry and balance of the mind are injured or destroyed, the power of efficient mental effort is essentially impaired, and, it may be, a mental distortion is produced, which is fatal to reputation and usefulness. A well-balanced mind is one of the greatest blessings that can be enjoyed. It is doubtless, in part, the gift of nature, but much, very much may

be done to form it by a proper course of discipline, and it is a result worthy the highest effort, and essential to the perfection of a thorough education.

3. A liberal education implies the cultivation of the moral susceptibilities. The moral, like the intellectual powers, may be strengthened and improved by careful nurture and discipline; and, when this is neglected, there always exists the want of symmetry and balance of mind of which we have spoken. But this is not all. There is also an unhappy defect in the sources of the mind's own enjoyment, and its means of usefulness. The moral susceptibilities by neglect become insensible; deprived of their proper aliment, they are stinted in their growth, and they cease to exert a softening and cheering influence over the dry and frigid operations of mere intellect. Hence results a cold indifference to moral obligation, and a disposition to substitute intellectual superiority for moral worth, and even to look with contempt on those who are destitute of the one, though adorned with all the excellencies of the other. To prevent such a result is a difficult, but a most important task; and that education cannot be called complete, which does not make large provision for the only preventive—moral cultivation. On this depend the most important benefits of such an education, and indeed, without it, it may prove a curse.

4. The acquisition of knowledge, inferior, as it has been shown to be, to mental discipline, is by no means an unimportant part of a liberal education. An observing mind is, indeed, constantly acquiring knowledge from every object on which it fixes. Whether it contemplates the works of nature, the page of history, or the human heart, it gathers stores of useful information. But there are many subjects which, from their importance, should be made matter of instruction, and happily these are so treated, in modern times, as to combine much intellectual discipline with their acquisition. Other subjects may be safely postponed till the mind, invigorated by severer study, shall be able to grasp in a day, as it were, that, which, at an earlier stage, would have required protracted effort, and till it shall also see the bearing and value of that, of whose applications it might before have been wholly insensible.

5. A complete education implies a reference to the whole duration of existence. The faculties which are trained here are

trained for immortality. They are destined to expand, strengthen and act forever. The impress they receive in this their first development, the direction they assume will be permanent and eternal. Revelation, which discloses the nature and destiny of the undying spirit, points out the way by which it may be prepared for high employments and exalted joys in the life to come, and, at the same time, gives warning of the dreadful evils to which it will be subjected in eternity, in consequence of misimproving the period of its probation. How defective then is every system of education which has not reference, chief reference to the world to come! How unworthy the effort to form the mind for the struggles of earthly ambition, for grasping the bubbles of fame, or the treasures which perish with the using, while it is not taught to aspire to glory, honor and immortality in heaven! The youth, who enjoys the advantages of a liberal education, should be led to feel that all his acquisitions and efforts take hold on eternity—that the opportunities which he enjoys are not designed merely to prepare him for action on this stage of being, but to form such a character as shall make him a fit associate and co-worker with the spirits of light. He should always act in reference to ultimate results. No other course is worthy the character and destiny of an immortal being, or can ensure the chief end of all education, the greatest usefulness and happiness of its subject. Whatever attainments the educated youth may make, if he have made no provision for his eternal existence, there is a radical defect in his education. "Knowledge," we are told, "is power;" but, be it remembered, it is power to *curse* as well as to *bless*. Knowledge has necessarily no purifying tendency. It enables its possessor to exert an influence on society, but does not determine what that influence shall be. It brings with it a fearful responsbility, which, if not discharged, will in the end prove wormwood and gall. It is a melancholy reflection, that so many of our educated men, men of influence and weight in society, are without the fear of God, and acting only for the present life. Better, far better would it be for them, never to have enjoyed the advantages of education, than to have improved them so unworthily. Nor can I look on a youth of noble powers and high attainments, but destitute of the love of God, without anxiety and compassion; for I feel that he is exposed not only to fail of the great object for which those pow-

er were given him, but to sink deeper in endless woe in consequence of their possession.

II. How may a thorough and complete education be acquired?

My limits will allow me only to consider the most important points involved in an answer to this question. To examine it in detail would require a volume. I shall aim to suggest some hints which may be useful to those whom I address.

1. To acquire a thorough education, sufficient *time* must be devoted to it. The faculties of the mind, like the powers of the body, come slowly to maturity and perfection; nor is it wise or safe to endeavor to hasten either. There are, at the present day, many temptations to pursue a rapid and consequently superficial course of education. The student looks forward, with anxiety, to the day, when he shall enter on the active scenes of life. He is, it may be, somewhat advanced towards manhood: he shrinks from a protracted course of study, and longs soon to begin to discharge the duties, or enjoy the benefits of professional or public life. His judgment, inexperienced and ignorant of the bearings of a thorough course of study, adopts the delusive opinion that *he* may safely omit what is prescribed for others. He sees, perhaps, no connection between many parts of such a course and his fitness for his desired profession: all around him is eagerness for the world: he hopes by haste to outstrip and outshine the tardy student, who prefers a slower but surer way; and thus he sacrifices most, if not all of the advantages of an education to this anxiety to finish it. Or, if he does not relinquish the idea of a College course, he supposes that a very short time will suffice for preparation, and that, if he can only "*enter*," he shall be sure of a thorough education. Nothing is more fatal to the formation of a sound scholar than such imperfect preparation, and nothing more short-sighted than the policy which approves or adopts it. The student, in such circumstances, is obliged to grapple with difficulties which he cannot overcome: he sees others, less talented perhaps than himself, far outstripping him in the race: he is constantly dissatisfied, because his best efforts are unsuccessful, and at length yields in despair, and satisfies himself with a low standard of attainment, or altogether abandons further effort. To the student who chooses a shorter course, and to him who neglects thorough preparation for a full

one, the results are alike disastrous. Both essentially impair their usefulness through life: they usually take a low standing among educated men: they feel, at every step, a painful sense of ignorance and want of discipline, and they fail to exert that influence on society which they might otherwise have exerted. Nor have they the consolation of hoping that the evil may be remedied. Youth, the season for education, is past: the cares of life have succeeded, and the character of the mind is fixed. To one who considers the comparative influence, through life, of a thoroughly educated and a superficial scholar, the additional time spent by the former in acquiring his education, whether one, two, or even three years, will appear to have been well employed—nay it will seem that a single year of active exertion afterwards will compensate for it all. Let it be settled then in the mind of every youth who seeks a liberal education, that he can acquire it only by *protracted effort*—that there is no royal road, or rail-road, which will carry him rapidly forward. Let him count the cost, and be willing, under the advice of the experienced and judicious, to wait the slow but sure results of time.

2. In order to acquire a thorough education, such studies must be pursued as are best adapted to accomplish the end. If, as has been seen, the chief object is the discipline and training of the faculties, then those exercises which are best fitted to produce this result are the most important. In the words of another, "those branches of study should be prescribed and those modes of instruction adopted, which are best calculated to teach the art of fixing the attention, directing the train of thought, analyzing a subject proposed for investigation, following with accurate discrimination the course of argument, balancing nicely the evidence presented to the judgment, awakening, elevating and controlling the imagination, arranging with skill the treasures which memory gathers, and guiding the powers of genius." On this point, experience is the surest guide, and they only who follow its leadings can expect success.

Foremost among the studies adapted to intellectual discipline stand the ancient classics; and were this discipline the only benefit they confer, it would, in my view, be a sufficient reason for their adoption. Indeed, I know of no substitute for them in this respect, and I believe that, even if they were to be forgotten at the end of the course, the time and labor which they re-

quire would be most advantageously expended. I do not design to go into a vindication of the study of the classics: it has been often and ably done. Nor have I time to specify and illustrate the important and various influences they exert upon the mind. Suffice it to say, that they improve the memory, strengthen the judgment, refine the taste, give discrimination and point to the discerning faculty, confer habits of attention, reasoning and analysis—in short, they exercise and cultivate all the intellectual powers. They, moreover, unfold the structure of language and teach the philosophy of general grammar: they bring the student into direct contact with the mighty minds of antiquity: they give him access to all that is excellent and beautiful in ancient literature: they prepare him for the study of the word of God: they contain the literature and history of sixteen centuries succeeding the Christian era: they are connected, in most important relations, with modern languages and literature, and with professional pursuits. No study can be named, whose beneficial influences are so numerous and important.

But, be it remembered, these important advantages are realized only by those who study the classics with care and diligence, satisfied with nothing short of the most thorough analysis, and the most exact and minute investigation of principles. The superficial student, who is ignorant even of the forms of the grammar, and who hurries over his lesson to avoid failure at recitation, and the ill-advised student, who, without adequate preparation, enters an advanced stage of classical study, will alike fail of the advantages which we have specified. Much time, undoubtedly, is spent upon the classics to little purpose, in every stage of education. But the reason and the blame of this lie with the student himself, or his instructor, and the same is true of every branch of study, and especially of those designed for mental discipline. If the classics, with all the imperfection attending their acquisition in many of our schools and seminaries, still produce effects so manifestly valuable, what might not be their utility, were they universally taught with accuracy, and studied with persevering zeal?

Equally important with the ancient classics, for the purpose of mental discipline, are the mathematics. They teach the student to reason, train him to exactness in his processes, and lead him to certainty in his conclusions. They stimulate the invent-

ive faculty, increase intellectual vigor, and, by a due combination of analytical and synthetical exercises, prepare the mind for every kind of investigation. The influence of mathematics is not the same in kind as that of the classics. The one has to do with demonstration, the other with probability. The one compels the assent of the mind, the other requires the exercise of judgment, and the balancing of evidence. The one needs the modifying influence of the other, and without it tends to injure the proper balance of character. An education exclusively mathematical would be likely to incapacitate the mind for estimating the force of moral evidence, and, at the same time, to chill the finer sensibilities of the soul.

Every part of mathematics has most important connections with physical science, and is indeed absolutely necessary to a thorough knowledge of it. On this ground, then, the study is of great importance, and eminently practical.

We not unfrequently hear the student inquire, with evident distrust, what good can result from abstract mathematical processes—what they can avail as a preparation for the duties of life. And we are told by some, who have completed a course of education, that the mathematics were never of any advantage to them. We are ready to believe the *assertion*, but we impute the *cause* not to the science, but to the man—not to the study, but to the neglect of it. It often happens that the student, misled by a false view of the case, and prompted, it may be, by aversion to mental effort, slights his mathematics, till he finds himself unable to proceed, and thus loses a most important part of his education. In acquiring an education, the student is not studying a profession, but is training his faculties for any and every intellectual effort to which he may be called. And for him to suppose that nothing can be useful to him but what he can see to have a bearing on future life, is a decisive proof of conceit and folly. It is ignorantly presuming to judge of the results of a course which he has not tried, in disregard of the decisions of common sense, and the experience of ages.

There is, as has been already hinted, a disposition at the present day, in education as in other things, to hasten forward to immediate results ;—a sort of intellectual utilitarianism, which measures every subject by its direct and obvious bearing on the business of life. Hence we have institutions, where a partial and

superficial course is substituted for a thorough and full one—where the student is deluded with the idea that he is *acquiring an education*, and is destined to outstrip those, who are foolish enough to plod on in the beaten track. It is greatly to be lamented that men, of whom better things might have been expected, have lent their names and their influence to such a delusion. From this excessive desire of utility, also, have resulted institutions, in which an attempt has been made to unite with a full course of study subjects of a very different character, on the ground of their supposed practical importance.*

My limits will not permit me, nor was it my intention, to specify all the studies required for a thorough education. It is obvious that, to give complete and proportional exercise to the faculties, a variety of other subjects must receive attention. The philosophy of the human mind, logic, rhetoric, the art of composition and of extemporaneous speaking, natural science, select reading, and practical moral and religious instruction are all of indispensable importance. Reading should be sparingly pursued, ex-

* One of the most curious of these plans is that of the Rittenhouse College, at Roxborough, Pa., incorporated in 1837; from the published outline of whose objects, I extract the following statement: "Rittenhouse College will contain all those departments of literature and science that are found in similar institutions in the United States; and, in addition to the regular course of collegiate study, a separate department for teaching, not only theoretically, but practically, the different species and various races of *the domestic animals*, their different breeds, the uses to which each breed is applicable;—the useful crossings of breeds, and the best methods of producing, rearing and feeding each class and breed;—the breaking, educating, training and fattening certain domestic animals;—commercial jurisprudence, as regards domestic animals, including the uses to which can be applied their flesh, hides, offals, tallow, hair, wool, horns, teeth, hoofs, entrails, blood and bones;—the study of the outward forms of domestic animals, pointing out their beauties, marks of strength and speed, and their defects, together with the method of ascertaining their ages;—their internal structure and anatomy, the various foods used for their nourishment, and the various ways of raising, curing and preparing them;—the various medicines required for domestic animals, both botanical and mineralogical, with the manner of mixing and administering them;—the best methods of preserving domestic animals from contracting diseases, and the most approved means of cure, and of preventing contagion and infection; and, finally, the most approved mode of shoeing certain domestic animals, either generally, or when diseased and lame. Any person who shall subscribe for five shares ($250) may send to the College infirmary one diseased horse, or other domestic animal, annually, for medical treatment, and a subscriber for a single share may have one horse annually examined by a professor, and receive a certificate of his soundness," &c. &c.

This is *practical education!*—this the wisdom of the 19th century!

cept in connection with the course of study. He who reads much at an early stage of education, like the youthful traveller, will indeed find much to gratify his curiosity, but, not having learned to apply the principles of philosophy and taste, he will derive little practical improvement.

3. For the acquisition of a thorough education, able and competent teachers are indispensable. It sometimes happens, it is true, that a youth of ability and perseverance, with insufficient, or even bad instruction, or without instruction, makes very considerable advances in sound learning. But such cases are rare, and, even in them, serious disadvantages, and often irremediable evils, are the result. In general, the scholarship of the pupil cannot be expected to be better than that of his teachor, and, if the latter have wrong views of education, the former will be likely to imbibe and act on them. It is, in every point of view, of the highest importance, that every part of a liberal education should be conducted under good instruction. A mistake in this respect at the outset, is a sufficient cause for final failure and disappointment. It is almost impossible to correct bad habits acquired under an incompetent teacher, and it is always done, if done at all, at a great expense of time and effort. The deficiency in teachers is one of the greatest obstacles in the way of sound education, and, while it exists, thorough scholarship cannot become general. Nothing, it is true, is more preposterous than for a man to undertake to teach what he does not himself understand—to communicate his own errors and defects to a class of pupils, and thus to perpetuate the evils under which he suffers. Yet such is too often the fact. Many teachers, indeed, seem unconscious of their incapacity;—others have learned that there is a more excellent way, but, despairing of reaching it, they plod on in their ignorance. Let such teachers know that they are doing irreparable injury to immortal minds, and that it is their bounden duty to abandon the profession, or qualify themselves suitably to discharge its responsibilities.

4. In order to acquire a thorough education, the student must patiently and perseveringly exert his own powers. Unless this is done, all else will be in vain. There is no other way to discipline the faculties than to exercise them on appropriate objects; and in order to render this discipline thorough, the exercise must be severe and painful. The youth must be thrown on his own resources, and, rallying his own powers, must overcome the dif-

ficulties which he meets. It is in vain to rely on genius, to resort to others for assistance, to avoid investigation by means of translations, to depend on lectures and other modes of passive reception of knowledge, to extemporize without preparation;—the student, who takes any or all these methods, may possibly finish the course, but he deceives himself, if he imagines that he is acquiring a thorough education. He deprives himself of the chief value of a course of liberal study, and lays up ample materials for unavailing regret in future.

It is one of the great evils of the present day, that so little effort is required in our schools. School books are constructed and instruction given, to a great extent, in such a manner as to furnish but little mental discipline. Almost every thing is made easy, much ground is gone over, but what the mind receives without effort makes but a slight impression, and is soon lost. Thus "while men strive to render science easy, they make it infantile; and while they labor to make philosophy intelligible to the youngest and least formed capacity, they make philosophy herself a child." And I question whether our fathers did not often acquire more valuable discipline from the careful study of the few books they had, than the present generation do from all their multiplied advantages. This superficial tendency the thorough student must resist: he must have resolution enough to reject the proffered aids which modern effeminacy requires, and, by independent and severe reflection and study, must enure his mind to original investigation. In this way alone can he gain the eminence to which he aspires.

5. Another important means of so desirable a result is the adoption of a high standard of attainment. No man can be expected to rise above the mark at which he aims, and almost all fall far below it. The student who wishes to be well educated, must aspire to *absolute*, not *relative* excellence. He must seek not merely to perform his daily exercises to the satisfaction of his instructors, not to appear, or to be, as thorough as others, not to content himself with superiority in one or a few branches of study, while others are neglected. No, adopting perfection for his motto, he must strive to *satisfy himself;* to be, as well as to appear, a sound scholar, and to leave nothing within the range of his course unattempted or unaccomplished. Many students fail, in this respect, from not being aware how high they ought to aim,

or from a false estimate of their attainments. They would be surprised to be told that, with all their conceited proficiency, they are yet very imperfect scholars, ignorant of much that is fundamentally important, and indeed having little claim to scholarship at all, except what is founded in the fact that they are better than the majority. Till a high standard of attainment is established in our public institutions and preparatory schools, sound and general scholarship cannot be expected.

III. Such an education as I have described confers most valuable benefits on its possessor and on society. To the former it gives the consciousness of intellectual and moral power and of an elevated grade in the scale of being: it opens to him a wide field of rational enjoyment: having trained his faculties for independent and vigorous action, it enables him, in whatever course he directs his investigation, to drink deep at the fountains of knowledge, and in the unaided decisions of his own disciplined mind to rest with confidence. Nor are its benefits confined to this world. The mind, which in this life is trained for immortality, it would seem, will have high vantage-ground in eternity, on which to commence its endless career of improvement and happiness. Having reached the farthest limit of human advancement, it is prepared to begin the science, as well as to join in the songs, of Heaven. On the other hand, who can say that faculties, undisciplined in this infancy of our existence, will not remain undisciplined forever?

A thorough education, too, blesses society. It gives a commanding and beneficial influence over the opinions and conduct of men: it opens a wide field of usefulness, enabling its possessor to do much for the cause of education and morality, and for every cause that has a bearing on human happiness. The opinions of men are, to a great extent, dependent; and the amount of influence, silently exerted by men of intelligence and weight in society is often far greater than they suppose. But if it is a sound and beneficial influence, the wider it extends the better; and who would not seek, by a thorough course of preparation, thus to lead society onward in the path of virtue and happiness? What higher motive can prompt the student to vigorous effort, than the prospect of being widely instrumental in diffusing blessings upon his race?

Such an education as I have described, it is the object of this

institution, and the intention of its officers, to give. We approve of no partial or abridged courses of study: we give no countenance or encouragement to those who seek the name, without meriting the character, of scholars. To the indolent, the superficial, the dissipated, we give fair warning, that here is no place for them. We can tolerate none who are regardless of the advantages which are proffered them, and are active only in exerting a pestilential influence on others. But those who value, and are anxious to obtain, sound learning, who are willing to labor and study with patient assiduity for so important an end, we invite to this institution, consecrated to the cause of science and religion. We promise them the best assistance and instruction which we can render: we seek no higher reward than the consciousness of success; and may He, from whom alone all wisdom proceeds, enable us to discharge our responsible duties, and crown our efforts with His blessing.

ADDRESS,

BY PROF. C. B. ADAMS.

All human efforts may be referred to one of two causes. They may be pursued for the sake of a direct gratification in some favorite employment, or, with more or less present self-denial, for the means of an ulterior advantage to ourselves or others. The employments of a civilized community belong, for the most part, to the latter class; and thus utilitarian habits of acting are formed, which strengthen similar habits of thinking, until every pursuit, whose utility is not obvious to the common eye, must be arraigned before the bar of public opinion to answer the inquiry, "of what use is it?"

But while such an inquiry is certainly the dictate of reason and of conscience, sentence should not be pronounced against every employment, which, instead of being useful with reference to some ulterior good, is itself a high gratification, and in itself a good. A liberal construction of this inquiry would not indeed distinguish between the two cases.

It may reasonably be expected, on an occasion like the present, that some attempt would be made to point out the benefits, which will accrue from the pursuits of Chemistry and of Natural History. If it can be shown that they are in themselves the source of much and high enjoyment, this alone might be ample inducement to enter upon them. But if it shall appear that they also perform an important part in supplying the physical wants of the community, and merit a prominent place in every system of liberal education with reference to mental discipline, quite enough will have been said to commend them to the attention of this enlightened audience.

It would be impossible, within the limits of our time, to notice in detail all the numerous sciences, which fall within the departments of Chemistry and Natural History, and we shall therefore state, in a very cursory manner, the advantages of Chemistry

and of a few of the branches of Natural History, and the opportunities which can here be enjoyed for the pursuit of these studies.

What then are some of the benefits which have resulted to society from the labors of the chemist? What is the practical advantage of experiments to ascertain all the properties of all known substances, and of subjecting compounds to the torture of fire and alkali and acid, to learn what are their constituents? A full reply to these inquiries would be a history of the rise and progress, for the last fifty years, of half the arts of civilized life. By the joint efforts of chemistry and mechanical philosophy, the poor man may now live in a state of comfort, which once the wealth of nobles could not procure. Let the man of moderate circumstances look around his dwelling, and enumerate the articles of metal, of porcelain and of glass, and the colors which please the eye in every article, and he will begin to see some of the comforts, for which he is directly or indirectly indebted to the labors of the chemist.

The application of chemistry to agriculture promises incalculable advantage to that most important of all arts. By a judicious treatment of our soils their value may be greatly increased. The celebrated French chemist, Lavoisier, applied his practical acquaintance with chemistry to the cultivation of a farm of 240 acres, and in nine years the improvement of the soil was such, that his crop was doubled. Instead therefore of forsaking the soil of New-England for visions of the far west, let our intelligent farmers secure the services of an agricultural chemist in every state, and their farms, instead of being exhausted, will constantly improve in fertility. Such a scheme may be thought novel, not to say visionary, but in fact has been partly followed by the states of Maine and Massachusetts, whose geological surveyors have, within two years past, devoted much time to the chemical examination of their soils, and the results of their labors are a treasure to every one who will avail himself of them.

Among all the arts, which owe their origin or advancement to chemical science, some of the most instructive instances are those, in which the original processes of the chemist were conducted without reference to any practical advantage. The existence and remarkable bleaching properties of chlorine were

discovered in experiments, which were suggested solely by scientific curiosity. When chemists had completed their investigations, practical minds turned their discoveries to good account, and the bleaching process, which once required the labor of a year, is now performed with comparatively little trouble and expense. A scientific chemist discovered, in the ashes of marine plants and zoophytes, a new elementary substance, which he called iodine. Now it had long been known that the ashes of the sponge were serviceable in treating the *goitre*, a kind of wen, which is very troublesome to the Swiss. It was therefore suggested that the good effects might be owing to iodine, which was accordingly tried, and found to be an invaluable agent to act upon the glandular system.

The history of so small articles as the phosphorus and Lucifer matches is a simple but instructive instance of the thousand little conveniences, for which we are indebted to the chemist. A few years since it would scarcely have been believed, that an instrument for producing fire without any trouble could have been afforded so cheap, that an hour's work of a common laborer would pay for a thousand of them. This little article, like many others, would never have been known, had not chemists discovered the substances which are used in its preparation.

The philanthropist shudders at the horrors of war, which have continually rendered many portions of the earth the scene of the most intense agony, which human nerves and human affections can suffer. But perhaps from no one source have its evils been so much mitigated, as by chemical inventions. Destructive as modern warfare is, the introduction of gunpowder has made it far less terrible than were the wars of former ages. Then the action was carried on, for the most part, hand to hand, and a battle could not thus be decided without immense carnage. It now more seldom happens that an engagement results in the almost entire destruction of one of the parties. The general introduction of the steam-gun, the Congreve rocket, and the bomb-cannon will completely carry out the principles of modern warfare, increasing the distance between the belligerent forces at the time of engagement, and thus enabling more to follow the excellent advice of Hudibras, that

> "He who lives to run away
> May live to fight another day."

It is a remarkable fact, that the more efficient and deadly are the instruments of warfare, the less is the destruction of human life. A small nation is placed, by such weapons, more nearly on a par with the more powerful, and is much less exposed to hostile and ruinous invasion; and nations of equal strength will be able to inflict so much injury upon each other, that victory and defeat will be almost alike disastrous. In ancient warfare, although the carnage was much greater, yet as it was mostly confined to the vanquished, the hope of success impelled each to the contest: but the case is quite different, when almost certain destruction awaits *both* parties, and as discretion is the better part of valor, wars will be less frequent. The most efficient weapons also lead to the most speedy termination of a contest, and the recent introduction of bomb-cannon into the French navy affords a striking illustration of this remark. With this new and terrible weapon, three frigates in four hours laid in a heap of ruins the fortress of Vera Cruz, which, at an expense of millions, had been made one of the most formidable in the world, and was thought to be impregnable. Alexander the Great employed an army for ten years in the siege of Tyre. With the bomb-cannon a few frigates might have begun and ended it in as many hours. When this weapon shall have come into general use, hostile fleets probably will seldom venture into close engagement, (unless there should be a very great disparity of force,) for it would be fatal to both. Thus naval engagements will be less frequent, and, being carried on at more respectful distance, less bloody. The immense treasures, also, which have been lavished upon the construction of fortresses no longer impregnable, will be used for some better purpose, and nations will find it necessary to do what wisdom and justice and mercy have always demanded,—to make an amicable adjustment of their difficulties.

The general utility of the labors of chemists is sufficiently obvious, and their devotedness to them is sufficient proof of their enjoyment in them. But the present occasion requires that we should notice the advantages which result from its introduction into the course of liberal education. The chief object is, that the educated man may be acquainted with those general facts of chemistry, with which all are more or less concerned; such as the constitution of the atmosphere and of water, the nature of the more important chemical changes, as combustion and respi-

ration, and with the principles which are involved in the processes of the chemical arts. Such information adds materially to his happiness, and renders him a far more useful citizen, securing for him the respect and gratitude of a community. A public speaker, for example, who understands the constitution of the atmosphere and the nature of respiration, will better know what arrangements should be adopted, to promote the physical comfort and save the health of his audience. To the physician chemistry is indispensable, and if not acquainted with the nature of the compounds, and the affinity of the substances, which he administers, he must be ranked with empirics.

Natural history embraces a numerous circle of kindred sciences, which aim at a knowledge of all objects in nature. These sciences may be referred to two families, as they treat of the *organic* or *inorganic* world. The utility of the latter is more generally understood, and the development of mineral treasures has been so creditably appreciated in this country, that geological surveys have been instituted by law in most of the states in the Union. May I be allowed to dwell for a few moments on some of the advantages, which result from the cultivation of geological science?

Of the intimate connection which exists between the geological structure of a country and the employments of its inhabitants, we have a striking illustration in Great Britain. If a foreigner, says Dr. Buckland, should land upon the south-west extremity of Great Britain, at Cornwall, and proceed to the north, through Wales, to the south-west of Scotland, and through the Grampians to the German Ocean, he would find a barren region, with a sparse population of miners or mountaineers. The formations belong to the primitive and transition classes, and, as is usual, are covered with a thin, poor soil, but contain valuable mineral treasures. If another stranger should land in the south of England, and pass to the north through the midland counties, he would find a fertile country, whose population, however, is supported to a great extent by manufactures, which are carried on with the coal and iron, that occur in great abundance in the secondary strata of that region. In manufactures this district is surpassed by no other in the world. If a third person should travel through the western counties of England, he would find not a single mountain, mine, or coal-pit,

but a population exclusively agricultural, supported by a soil whose fertility is owing to the oolitic and the chalk formations.

Geology teaches us in what kind of rock formations, we may or may not expect to find valuable mineral substances. If a mineral is found only in one, two, or three formations, all search for it in others is lost labor. Great expenditures have been, and are yet very common in exploring for minerals, while, in many instances, any geologist, with five minutes inspection of the ground, could accurately predict the result. Some years since, $350,000 were lost in England in a search for coal, although a geologist would have at once foreseen the result of the exploration. For this valuable mineral occurs only in the secondary rocks, and is, for the most part, confined to a few of these, while this exploration was in a tertiary formation.

There are but a few formations in and above the middle of the secondary series, in which rock salt and brine have been found, and consequently we cannot expect to find this mineral in others. Yet in the capital of this state, a few years since, it was conceived that if the rocks could be penetrated to a depth below the level of the ocean, brine would be obtained for the manufacture of salt. Accordingly the primitive rocks were bored to a depth of a thousand feet. A whale ship on Lake Champlain would have been quite as profitable an investment.

Geology informs us, not only in what rocks to look for minerals, but also in what manner they occur; whether in beds alternating with the strata, or in veins crossing the strata. Coal always occurs in interstratified beds, and consequently each layer is wholly coal or wholly rock, and in an exploration it is therefore sufficient to see the edges or any part of a stratum to learn the character of the entire stratum. Now it is often the case that the strata of coal formations are much inclined, or are technically said to dip, so that the edges of all of them may be seen at the surface by removing the loose earth. By this simple and economical method, as much can be discovered, as by expensive perpendicular openings through the strata, and often more. In a neighboring state, search was made for coal a few years since by digging perpendicularly into strata which stood upright on their edges. Similar cases are very common, and much of the expense which is incurred in explorations for coal is thrown away from inattention to the simple principle just mentioned.

The same principle may also be applied to a number of useful minerals, which occur in beds.

The kindred science of mineralogy is also of great utility, in enabling us to distinguish different kinds of minerals, which resemble each other. How much time and money have been lost in digging out a yellow ore of iron, which resembles gold, under the mistaken idea that it was that precious metal! Probably instances of this kind are familiar to most of this audience.

There are several methods by which these and other more numerous advantages of an acquaintance with geology and mineralogy may be enjoyed by the community at large: by securing the services of competent geologists in surveying such districts as may be assigned to them, and communicating, in a popular form, the results of such surveys; and by the introduction of these studies into a course of liberal education, that educated men may be acquainted with their general principles, and be competent to advise in many cases, which may come under their notice. The advantages of these useful sciences may easily be secured to all, if a few become well acquainted with them.

But there are higher advantages connected with the study of geology, which do not come within the calculations of political economy. Considered as a source of intense intellectual gratification, geology is certainly not inferior to any department of science. It opens to us the history of the past, a history which runs back through a duration of time so immense, that it contemplates the introduction of our species upon the earth as a very recent event—a thing of yesterday. It spreads before our astonished view anterior creations of species of plants and animals, which for tens of thousands of years have been extinct, of monstrous form and size, and in number so vast, that mountains and large tracts of country are now composed, in great part, of their remains. It shows us that the existing continents have been, for many successive ages, the bed of tropical oceans, and leads us into the study of those mighty causes which have more than once changed the features of the earth's surface.

The distinguished Sir John Herschel remarks, that "in the magnitude and sublimity of its objects, geology is second only to astronomy," and if the immense and inconceivable duration of past time be as truly, although less palpably, fitted to excite emotions of sublimity as the boundless extent of space, geology

and astronomy stand together at the head of all human knowledge, *par nobile fratrum.*

As a subject for the exercise of the reasoning powers, few sciences are of equal value for mental discipline. If I may be allowed to compare geology with mathematics, not with reference to their importance in a course of liberal education, (for both are *indispensable.*) but to shew wherein the method of geological reasoning differs from the mathematical, I should say that in the latter the premises are few and obvious; and the labor lies chiefly in the relations between them and the conclusions. But in geology, there is the additional labor of searching throughout the entire range of physical science for the premises. In many cases also the inferences are drawn from the convergence of a great number of premises upon a single conclusion, rather than by following one simple chain of reasoning, as in mathematical science. Hence the celebrated English historian, Sharon Turner, has justly remarked, that "upon no subject has the human mind displayed its powers of inferential reasoning more creditably than in geology."

To those who are, or expect to be, occupied with the duties of the sacred office, the subject of geology becomes a matter of serious importance. The Holy Scriptures commence with a cosmogony, and infidels once began to triumph in its supposed inconsistency with the established facts of geology. Unfortunately, some distinguished divines now adopt an interpretation of the Mosaic account, which, the geologist knows, *cannot* be true, and they who seek occasion to attack the Scriptures, certainly have a weapon thus put into their hands, while others, whose belief in our holy religion is firm, are much disturbed in finding the Mosaic account, as they are taught to understand it, at variance with the established truths of science. Let the minister of the gospel be acquainted with the doctrines which God teaches in the book of nature, as well as in the book of revelation, and the records of both will be found to harmonize.

Those departments of natural history, which are connected with the organic world, form a very numerous family of sciences. It might be discouraging to the student to enumerate the subdivisions of zoology, as mammalology, ornithology, herpetology, ichthyology, conchology, and malachology, &c. &c., and to spread out the numerous details of a hundred thousand species of plants.

and of more than half a million of species in the animal kingdom. Were it not for the astonishing progress, which has been made in these studies within the last fifty years, it might seem a hopeless undertaking, even for combined and systematic effort, to illustrate, by descriptions and figures, the habits and the physiology, the external characters and the anatomy, of such a host of species. The field is, in fact, so vast, that none may ever fear that the greatest efforts of human genius and industry, as long as time shall last, will leave nothing to be discovered in the organic works of God. But to ascertain the limits of the field, to lay down the boundaries of its principal divisions, and to mark its leading features, is a work, which has already been done. Or, to speak without metaphor, more than 80,000 species of plants and 100,000 species of animals, have been described and classified, and although many changes will be made in the progress of continual discovery, the leading features of this work are, no doubt, permanent.

Much might be said of the utility, with reference to our physical wants, of investigations in the two great kingdoms of nature, from which we derive both food and raiment. But I shall confine my remarks to those advantages, which the student and professional man may derive from these studies. The most striking feature in these subjects of science is multiplicity of detail, and in the sciences themselves, elaborate classifications. Upon few subjects do we find concentrated the results of such extensive research and minute and microscopic inquiries, combined with the most comprehensive generalizations, as in the classifications of botany and zoology.

One great object to be attained in the study of these branches of natural history, is the habit of classifying miscellaneous details, and of reducing all kinds of business to a well-digested method. In the language of Cuvier, "The habit which is naturally acquired in these studies, of the mental classification of a great number of ideas, is one of the advantages which is seldom observed, but which, when they shall have been generally introduced into our systems of education, will become perhaps the principal one. By them the student is exercised in that part of logic, which is termed method, just as he is in geometry by that of syllogism, because they require the most precise methods, as geometry requires the most rigorous reasoning. Now this art of

method, once well acquired, may be applied with very great advantage to studies the most foreign to natural history. Every discussion which supposes a classification of facts, every research, which demands a distribution of matters, is performed according to the same laws of thought; and, he who had cultivated these sciences merely for amusement, is surprised at the facilities they afford him in disentangling and arranging all kinds of affairs."

If we may assume, as already illustrated, the high value of geological science, nothing can be easier than to show the importance of most of the other branches of natural history, for geology is entirely dependent upon them for its progress. Many of the most important and interesting truths in this science are derived from the remains of plants and animals of former epochs, especially from their habits, which can be known only by comparison with existing species. Says Dr. Buckland, "We now approach this study, [of geology,] aided not only by the higher branches of physics, but by still more essential recent discoveries in mineralogy and chemistry, in botany, zoology, and comparative anatomy. By the help of these sciences, we are enabled to extract from the archives of the interior of the earth, intelligible records of former conditions of our planet, and to decipher documents, which were a sealed book to our predecessors in the attempt to illustrate subterranean history." To this dependence of geology upon other branches of natural history, is owing the fact that most of its valuable and interesting results have been obtained within a very few years. Although much time and talent were devoted to geological speculations, little permanent advance was made, until those other sciences had prepared the way.

It is, however, neither for pecuniary profit nor even for mental discipline, that the study of organic nature has been pursued by naturalists, so much as for the intrinsic pleasure. Probably few, if any, have entered into these studies beyond the dry technical details, which necessarily await the beginner, without experiencing a delight, which has grown more and more intense, until it has become a passion. So various also are the studies of the different branches, that it is difficult to conceive of a mind, to whose constitution some of them would not be perfectly congenial. One may be occupied with the individualities of form

and color in the descriptions of species, and of action in studying their instincts and functions; or may ascend to the labor of generalizing and classifying, and may reason upon questions in the philosophy of botany and zoology. It is not therefore for a favored few that these pleasures are reserved, but any, who wish to study the works of divine power, and goodness, and wisdom, can easily find a portion, which will afford the most delightful employment within the whole range of science or art or business. Higher enjoyments the things of earth cannot afford.

But while the hope of advantage and the prospect of high gratification combine to allure the student into these Elysian fields, it may be interesting to inquire into the peculiar advantages for these studies in the location of this institution. In the study of chemistry, location is of little consequence, except for the convenience of procuring the material of a laboratory; but in natural history, location is every thing. I am happy to say that this immediate vicinity affords abundance of materials in more of the branches of natural history than almost any other portion of our country. The geologist will be surprised at the number of formations which he will cross within a few miles to the east and west. Upon the shores of Lake Champlain he will find strata abounding in organic remains, and in the Green Mountains, the older primitive rocks. For the study of mineralogy, the narrow limits of this state afford richer and more abundant materials, perhaps, than any other in the Union. The great variety of geological formations and of surface, from the mountains to the lake, produces an immense number of species of plants, and renders this one of the most attractive regions to the botanist. This variety of plants and of station again may be expected to furnish an almost discouraging variety of materials for the entomologist. The limestone districts, the ponds, the rivers, and the lakes, furnish the most interesting subjects for the conchologist, and although we cannot boast of so many species of mollusca as might be found on an extensive sea-coast, yet those are abundant, whose distinctive characters, in the present state of American conchology, constitute one of the most important and difficult parts of this science. Besides these classes, which hold a middle rank in the scale of animal life, we have ample materials for the study of the higher orders. For investigations among the lower orders, nature has indeed placed the greatest facil-

ities far away in foreign oceans. Let the sons of this college and its friends assist in the enterprize of placing within its cabinet specimens of every species of living thing, however rare or minute, which grows within the state, and we shall soon be surprised at the profusion of nature.

But the field is not only one of great intrinsic interest, to a great extent it is *new*. The geology of this state is yet, in a great measure, unexplored, although it cannot be expected that our legislature will long suffer its rich mineral treasures to lie unnoticed. The success which has attended the labors of a few mineralogists, offers high encouragement to any who shall make further investigations.

The researches of a botanist, with a view to the discovery of new species, would undoubtedly meet with ample success. The entomology of the state is almost entirely unknown, and in this science hundreds of new species may be found. In short, a rich harvest in almost every branch of natural history awaits those who will reap. Is it too much to hope that this vast empire will speedily be explored?

Will the members of this institution allow me, in conclusion, to appeal to them with reference to the object of making its cabinet as full a representation as possible of the natural history of Vermont? The valuable cabinet of minerals, which was, to a considerable extent, collected by Dr. J. A. Allen, leaves less to be done in this department; but collections in most of the other branches of natural history are now to be commenced. What can be a more agreeable object in those excursions, which a due regard to health requires, than the collection of specimens in these branches, until the most minute insect, and the meanest reptile, and the inhabitants of the air and of the waters, and every species of living thing, shall here be represented?

ADDRESS.

BY PROF. A. C. TWINING.

In a state of imperfection like that which this world exhibits, where the lines of frailty are engraven deeply upon every plan and device even of the most benevolent and wise of our race, it is often useful to take a scrutinizing review of our most cherished and best established systems and institutions. This is, upon every subject, the direct road to correction and improvement; and it is well when the active spirit of an age like our own makes it a highway well beaten by the steps of inquirers after truth and the means of usefulness. Whatever lighter attractions such a review may fail to possess, it may yet be dignified with the high interest of practical value,—especially to all those who, by experience of the fluctuations and agitations of human opinions, have been taught the necessity of settling their own ideas upon a basis well laid and thoroughly examined.

These views, if they are just, form a sufficient reason for my occupying your attention, on this occasion, by the consideration of a subject simply practical,—although one which has not often perhaps been treated of in a distinct form. In a day when colleges are multiplied, and are fixing their stamp upon the mind of this nation, it is of extreme importance to scrutinize the first principles and elements of so common and effective an institution. I am going, therefore, to inquire what, in the circumstances of this nation, *a college ought to be;* what, in its *religious bearings and system of spiritual means*,—what, in its *plan of intellectual discipline and internal government*,—and finally, what in its *relation to science at large*, irrespective of the particular system of instruction and exercise carried on within its own walls.

It is to my purpose to say a word here respecting education in general. And, in so doing, I would set it in that point of light

which exhibits it as immediately connected with those great interests of the mind which alone will be ultimately felt to possess a lasting value. I would speak of education as a system of means adapted to assist man in fulfilling the real end of his being. This I would say that it does, even in respect to the relations of man to his Maker; but much more in respect to man considered as an active agent and instrument in dispensing to others lasting enjoyment and virtue. First, it does this in respect to the relations of man to his Maker; by ministering to the spiritual part of our nature, to meditation, adoration and reverence, subjects and opportunities which cannot be apprehended and furnished otherwise than by the intellectual and rational faculties, even to the soul attuned to the enjoyments of heaven. But, in the second place, education is much more effective in respect to the relations of men among themselves. For, with regard to the Maker of the universe, all may be considered more nearly on a level. Even the galley-slave has powers to apprehend the nature and being of God—to admire him in his works, and to understand his word—which constitute almost the sum of what our nature, in this life, can attain to: so that the highest acquisitions of intellect are, in this respect, like the achievements of one who gains some lofty Alpine summit,—inaccessible indeed to ordinary mortals, and opening to the view objects and scenes which excite a noble and sublime satisfaction,—yet, when all is done, he who can climb ordinary hills and taste the enjoyment of an ordinary landscape has almost the entire sum of what the most expert and persevering traveller can possess.

But with respect to the agency of man in promoting happiness and virtue among our species, the level is at once broken. Here wide extremes take the place of equality. The slave indeed has his circle of beneficial action, but it is a narrow one; while, on the contrary, the man of great and cultivated powers, endowed also with the disposition and the opportunity to use them well, may fill a circle which spreads over the entire face of human society.

This is therefore the view which ought practically to be taken of all education; that it is the means of assisting man to fulfil the great end of his being, especially by forming his powers and aims with reference to a high standard of usefulness,—by preparing him to be in life an ornament and a blessing to society.

To give exclusive attention therefore to the discipline and development of the intellectual powers, without reference to the spiritual and immortal nature of the mind, would be a fatal defect in collegiate education. High acquirements, blending the force of reason with persuasion, and set forth with a winning eloquence, carry in themselves no guarantee of a happy or even a safe influence. By an irreligious or profligate pupil, they may be perverted to the most dangerous attacks upon public virtue and the most destructive inroads upon private character and peace. But it will not be necessary to dwell at large upon these and similar obvious deductions from the course of thought pursued in reference to the object of education. It is only with respect to a single important but almost universally neglected duty that I wish to speak in detail,—that is, the duty of *personal conversation and effort*. How it has come that regular and systematic exertions of this kind have not (except at special seasons) been more fully recognized, as essential to the highest religious prosperity, at most of our colleges where a right sentiment prevails, is perhaps to be explained by the somewhat difficult nature of the duty. But, with all the obstacles which do exist, it cannot be true that the pastor of a college church can find, out of the pulpit, but little opportunity, or none, of winning the youth of his charge to the paths of evangelical virtue. Neither can it be true that other college officers and instructors, in the midst of a various and long-continued intercourse with their classes, are always, or even ordinarily forbidden by sound judgment to mingle the expressions of a kind and earnest solicitude for the pupil's spiritual welfare with their counsels in reference to his intellectual pursuits. Ought it to be so that the young student, leaving his father's house, shall emerge at once from the place where counsels and exhortations have surrounded and followed him, to one where, although he forms new associates, and is subjected to untried influences, scarcely a friendly voice speaks to him of dangers to be shunned or life eternal to be gained or lost? On the contrary, is not every parent entitled to expect that in those halls where youthful thought is roused to vigor and matured for manly action, his son shall find a parent's place, at least occasionally and in some feeble manner, made good, in respect of spiritual counsel and exhortations?

As, however, colleges are instituted, not *directly* for religious

objects, but for the promotion of sound learning, I pass to the consideration of some prominent general principles pertaining to a proper system of *mental discipline and internal regulation and government.*

The particular system of studies to be pursued, and the amount of acquisitions aimed at must be adapted to the standard of attainment which it is found expedient to adopt preparatory to admission. For this, the whole plan of education relies upon the preparatory schools and academies, and must forever be dependent on them. To state what is desirable, in relation to preparatory studies, would be to include every thing which a young mind placed under a judicious training can ordinarily acquire, by the age of fifteen or sixteen years. Far less than this however must be contemplated in the present state of common schools over our whole country. Indeed, under any circumstances, a great range of acquisitions in the applicant for admission to college privileges, desirable as it may be, is not by any means so essential as a thorough and complete acquaintance with all that the applicant professes and is required to understand,—combined also with acquired habits of diligent and accurate attention to lessons. It is the deficiency in this last respect which calls most loudly for reform. But since there must be, until a progressive reform can be effected, a somewhat low standard of acquisitions, and a somewhat low standard of thoroughness, even in respect of those, and expediency will require the admission of many applicants who offer themselves in the condition of what goes by the name of "poorly fitted," it becomes imperative on the colleges to see to it that the system of low standards and superficial habits (so long as it must be endured in relation to the work of preparation) shall at least end with that; and that the student, upon admission, shall come at once under a system which constrains and invites him to the best economy of his powers and his time.

That this *may* be done is demonstrated on a great scale at one of our national institutions,—an institution which, although less adapted to the education of the *man* than of the *officer*, and in this respect decidedly inferior to the body of our colleges, with all their imperfections,—and although subject besides to those moral evils and dangers which pertain to an army and to military life, is yet unrivalled in the completeness and perfection of

those specific intellectual endowments and practical attainments which its object embraces,—I mean the United States Military Academy. There the cadet, having been received with a stock of preparatory knowledge, often slender, is placed at once upon his preliminary exercises. In one week he learns the system he must conform to, and in six, if ever, it may be said, he has learned to conform to it; and a failure to conform puts a period in due time and infallibly to his continuance at the institution. With all the differences of nature and of circumstances between the institution named and our colleges,—the most important of which consists in the immediateness and pressure which the former can command,—no good reason is perceived why a system of somewhat similar completeness may not be transferred to the latter. Even should the doing of this curtail the range of studies and exercises, the aggregate of mental acquirements would be greatly enhanced. Or should it entail the necessity of a division into sections,—each section having a different range of study, but the same standard of completeness for its own particular range,—no insuperable difficulty seems to oppose an expedient which in many points certainly is highly promising. The specific mode however in which the object shall be accomplished is not material; but the public have a right to expect that college walls shall stand, not for their illusion, presenting the mere shell of sound learning, but as the depositories and the arena of thorough instruction, whence the graduates go out, masters, on the whole, of what they profess to have learned.

In regulating the details of study and of the exercises to which a thorough attention should be given, care must be taken to distinguish between collegiate and professional education, and to keep in view the specific province of the former. In *collegiate* education the simple object is to give a harmonious growth and development to all the faculties—in short to the *man;* on the principle, that the scale which measures the man will be the scale to measure also his future actions and achievements. Therefore, as the mind is one thing, and the faculties are to be developed in due proportion, it follows that the system of study and exercise which is best adapted to one mind, is, in ordinary circumstances, best adapted to the mass of minds. The point of excellence in education, some have supposed to be, the giving full scope and large encouragement to the peculiar bent of the

pupil's mind,—whether that shall lead to the mathematics, or poetry, or practical mechanics, or music, or any one specific pursuit. But reflection will show the other side of the question to be the true one; that while those objects to which the propensities strongly incline are sure to be diligently followed, and the corresponding faculties called into exercise, the danger is that other faculties not less essential will be neglected and therefore enfeebled. That which the mind least relishes may be the very exercise (and probably is the very one) which a proper mental discipline most urgently requires. The system we are combating would seem to imply that one man needs chiefly imagination, on the strange ground that it already predominates; while another, on the same ground, most needs reasoning power; that one man should possess, in a high degree, taste, another man discrimination; whereas the truth is that every man practically needs all his faculties, and the great object therefore should be to develop all in due and harmonious proportion.

Keeping in view then these fundamental ideas, we need say no more respecting the specific integral parts of a collegiate course than that they should be selected with such variety, and of such a nature, as to address alike the various faculties and most important habits of the mind. Thus, they should embrace the elementary branches of mathematics; because by these is cultivated a skilful and correct process of thinking,—a process which is substantially *one* in its application to all abstruse questions, as well in law, in morals, in metaphysics or in civil and political economy as in natural philosophy, or mechanics. Also they should embrace languages; for language is the instrument of thought, its nearest ally, and may almost be called the element in which thought subsists; by the study of which not only the memory is stored and strengthened, and a taste for the beautiful in thought and expression implanted, but a command acquired over the great medium of human intercourse,—a facility in depicting the exact shades of an idea,—a conquest over the poverty of speech,—and a quickness, force and brevity in the use of words—those conductors of thought which, like the electric fluid, chooses along its conductors the shortest path to its object: or, to sum up all, we say,—the study of language, by which man is taught to spread his own being, passions, thoughts and affections over the whole circle through which his voice or pen can reach.

Again, that course should embrace chemistry and natural philosophy; through which, as by a new vision imparted, the mind receives a light that emanates from the surrounding world; not like the natural light, bringing a knowledge of forms, colors and existences alone, but of causes and effects, interior constitutions and combinations; and by which light man walks as one at home amid the powers and operations of nature, their correct and intelligent interpreter: also the study of astronomy, which ennobles the conceptions; of natural history, which tends to classification, to well-arranged memory, to minute observation and various knowledge, and stores the imagination with gems of beauty and illustrations of a divine, all-pervading skill; of moral philosophy and political economy; of mental philosophy, teaching man to look inward and thence derive a knowledge of human nature,—not that knowledge of human nature valued by corrupt politicians, which consists in knowing how to turn the bad passions and selfish propensities of men to your own account, but that which shall give a facility in exerting right influences, and swaying minds to good purpose—especially the minds of the young. Finally, it should embrace the rhetorical arts of composition and elocution, the accomplishments which crown all others, and are to be sought after with the greatest care and perseverance: for, however science and various knowledge may form and develop the man, yet all the man's best proportions and endowments will lie concealed and useless, to the mass of human society, without the graces and the force of composition and delivery. What to us are the hidden stores of nature which are never to see the light? Of what value should we esteem even the warm vitality of spring, if never shooting up and opening to the day in a thousand colors and expanding forms?

By maintaining the distinction between professional and academic education, the one being adapted to develop the mental faculties in due proportion and universality, the other to fit man for the exercise of those faculties in a specific department, we do not exclude any branch of knowledge which is in demand for the ordinary purposes of life,—which is important to a man *as* man. On the contrary, nothing seems more desirable than to furnish and equip the scholar with every variety of knowledge, before the period of studious leisure terminates, and the exigences of active and professional life shut up the mind to one definitive

channel of action. Thus, although lawyers ready made are not expected from the college, yet the student finds it an advantage not to be despised, whenever a certain moderate number of lectures or lessons by an able jurist on some few elementary principles of that science are in his reach. Neither can the graduates of a college go forth as physicians; yet a brief course of anatomical lectures would not be for that reason the less appropriate or valuable. Neither can instruction imparted in the four years form an engineer; yet lectures or lessons upon construction, internal improvements and field operations may form a valuable addition to every man's stock of useful information, and especially may they aid in laying a ground-work for those who design afterwards to pursue the profession.

In the preceding selection of studies no mention has been made of history; not because it is deemed of minor importance, but for the very opposite reason, in part, and in part to raise the question whether, like geography, it does not naturally *precede* the college course and belong to the preparatory department; whether indeed it should not be esteemed an indispensable constituent of common school education. Of course the acquaintance with history here spoken of, although systematic, is very general and elementary, and such as is to be acquired from a text book and not by voluminous reading. In the college system this branch of learning holds a place, important indeed, but necessarily less prominent than it would hold at an earlier period of life, when teachers justly esteem it wise to take advantage of the susceptibility of memory and imprint deeply all the varieties of knowledge which mainly depend on that faculty. The danger is that if deferred, it will not be thoroughly acquired at all, and results have ordinarily justified such an apprehension. But of how great value would this knowledge be to a people like ours, a practical self-governing people. If the youth of our country, as a body, at sixteen years of age, among the results of their academic training could number these three; first, a *retentive* habit of reading—one which should ensure the lodgment of an author's ideas in the mind; secondly, a thorough and systematic, although not necessarily a *minute* acquaintance with geography; thirdly, a thorough similar knowledge of general history, is it not evident that, in their well-arranged minds, information of every kind, whether acquired from the newspaper, the

pamphlet or the volume would thenceforth find its proper place and go to build up a system of general knowledge? Would not our youthful candidates for a college standing come here with new food for thought, with new maturity and increased manliness of character,—such as would inspirit all their exercises, whether of recitation, composition, discussion, or oratory?

I am compelled to treat briefly the constituent divisions of my subject, and to make rapid transitions from one topic to another. It was proposed to speak next respecting *internal regulations*. A system of *studies* must obviously be carried out by means of a system of *measures*. On this topic little can be attempted here, except to gather into one view the principles which seem to have prevailed with the wise and venerable founders of our literary institutions,—but which their successors have not always thoroughly practised upon.

In every institution there must be a standard. That standard will have respect to the end of the institution, as being military, civil, literary or of some other definition. To decide what the standard for a college ought to be, we have only to observe the end of that institution; which is, to prepare the collegian for useful life. If then any young man is in a course of preparation for useful living, he compares well with the standard, otherwise not. Here, for example, is a young man of high talents and acquirements; but he is vicious, profane and disorderly. Mental power he is fast gaining, but is preparing to use it for the worst of purposes: he is below the standard.

Here is another of orderly habits and of dispositions excellent in the main, who by reason of indolence and imperfect application accomplishes little: he also is, at present, below the standard. Here is a third of correct character, and not wanting in application, who notwithstanding makes no considerable advances, but is losing the time that might be usefully spent in some occupation better adapted to his capacity: he also is beneath the standard.

What, in each of these cases, shall be the first step taken? The obvious reply is, bring the delinquent individual up to the standard. Do this, *first*, by personal influence, by the pressure of motives, by the use of persuasion and exhortation, and by private assistance if needed. Let no means be left untried,

Again, without delay, but not by way of censure,—on the contrary, as an act of friendly forbearance and of duty,—let parents and guardians be informed of the exact truth. Ordinarily you will have, added to your own, the whole strength, be it less or more, of parental influence. It is already taken for granted that moral and religious influence is not neglected. By these means, singly or combined, it will result, in perhaps a majority of instances, that the delinquent will amend his defects, and thus ascend to the level of the standard. But if not,—if the point becomes settled, upon full trial, that these measures are unavailing, let the consequence be immediate and uniform. Let the delinquent's bond of membership be silently dissolved, and he depart, not by violent removal, but by a process as gentle and natural as when the decayed limb or the unsound fruit drops of itself from the tree. No matter how soon it is understood that your college has an atmosphere which neither vice, nor sluggishness, nor dulness can breathe in long and survive.

I come now to the last topic proposed for consideration; that is, the relations of a college to the *progress of science in general*, irrespective of its own particular system of instruction and discipline.

The duties of a college may be considered as *esoteric* and as *exoteric*, to borrow these terms from the ancient philosophy, which had an interior department, for its own disciples, and an exterior, for the uninitiated. Not that there are, or ought to be, secrets in any science; for the object of modern philosophy is to open truth and spread it abroad, not to conceal it. But to those who take on them the charge of public instruction our country looks for the improvement of science itself; and to no others can she look; for, in our state of society, no others have ordinarily the opportunity of extensive research into scientific and literary subjects. A professor of chemistry therefore must be furnished with apparatus and with agents to an extent beyond that which is essential for the mere purpose of experimenting before a class. He is expected to possess the means of analysis, by the use of which he may ascertain and announce new facts, through the medium of our public journals. So, in the department of language, the professor is expected to have at command the treasures of a library, such as will enable him to ascend the

path of original investigation and emendation: and let it be remembered that every accession to science or literature, made in this way, goes to enhance the value of an institution in public estimation,—gives lustre to its name, and endears it to its patrons and alumni.

So, to bring home these remarks and confine them henceforth to my own department, it is expected that he who holds that department shall possess the means (and use them too) of adding something to the stores either of the mathematics, or natural philosophy, or astronomy. It is little perhaps that can be done, but there lie open certain unpretending paths of improvement, two of which, at least, are of a nature to be specified here.

In the first place, one path to improvement lies open, in the raising up in our colleges a great number of qualified observers of natural phenomena. There are certain philosophical occurrences for the facts concerning which we must depend upon a mass of observers among men in the ordinary walks of life. Such for instance is the occurrence of meteors, which flash out without warning, and pursue their momentary flight in the sight of those only who happen to be abroad. To obtain the data respecting them, the philosopher must rely upon the testimony of such accidental spectators as are qualified to judge of altitudes, of time, of position among the stars and other essential elements of computation. The same remarks are true in relation to auroras. The same also is true, although not to the same degree, in relation to the periodic returns of shooting stars. For the sake of these and many other observations of great value, in relation to winds and tides and general phenomena, it is desirable to mingle with the mass of men as many individuals as possible who know the places and names of the stars, who are judges of angles and of time, and have an acquaintance in general with the causes of natural phenomena.

Again, a second path to improvement lies open in the use of instruments for the observation of certain natural fluctuations and astronomical occurrences and aspects. Such are the state of temperature by the thermometer and of atmospheric pressure by the barometer, the annual depth of rain, the courses and intensity of winds, and the motion of clouds in their different strata. Such also are eclipses, occultations of stars and planets by

the moon, and other events which can well be observed by ordinary means, and which ought not to pass without attention and record. Even for these things, however, instruments and proper arrangements are required. Till of late little has been done in this department in our land. But now not only the old states are waking up to the subject, but even the west and south-west are expending considerable sums in supplying to their infant institutions the facilities for philosophical and astronomical observation. For the possession of these facilities our institutions rely of course upon the munificence of the public, and principally upon men of moderate means. For the benefit of the public these institutions were erected, and to the public they must look for continued and increasing support.

In conclusion, the idea must not be overlooked that all these efforts and achievements in the cause of general science have a reflex effect upon the intellectual formation of the pupils themselves. Surrounded with the apparatus, and breathing the atmosphere of advancing science, they imbibe the onward spirit, and a certain energy within lights up the fire of genius. Familiarized to the idea of discovery, they leave the beaten track, and begin to plume their wings for original and independent flight. And, in this, education will have put a period to all that her forming hand can do. Having toiled long in the recitation and the lecture and the private conversation, with line upon line and precept upon precept—amending here, revising there—at one time reproving and at another impelling, she brightens with hope at finding her last finishing touches applied—her last noble ardor infused. The precious youths who at early age flocked to her wing from humble life and the private fireside, from the plough and the hammer, whom both spiritually and intellectually she has advised, warned, corrected and reared, she will at length have conducted to the bound that terminates her guardian agency there on the verge of academic and of active life. To one she commits the interests of learning, to another the concerns of law and government, to some the cause of youthful instruction, to others still the seed of the gospel,—to all the interests of their country and of mankind. She pauses in deep contemplation. With anxious look she strives to pierce the distant unknown. Her hopes are vivid that all, in their various

paths, will so walk as to fulfil the great end of their being; that when the results of time shall be folded together for the last investigation, when the sower shall be called to his reward and the laborer to his account, they all will receive the wages of life well spent, a crown of endless glory. O vision worthy of hope, worthy of existence! O much longed-for results well rewarding toil,—results beginning indeed in obscurity, accumulating by slow and painful progress and perfected by feeble instruments, yet teeming with all the hopes of man, rolling onward to the end of time, consummated in immortal joy!

ADDRESS,

BY PROF. J. HOUGH.

In various respects, have exceptions been taken to the systems of education, which are adopted in our higher seminaries of learning. But, one of the most common topics of reproach, which have been urged against these institutions, and one alleged often with strong confidence and pressed with peculiar zeal, is, that English literature has been cast into the back-ground, and has been seemingly undervalued and disregarded, while a degree of attention and encouragement, altogether disproportioned to its value and usefulness, has been lavished upon the study of the languages of antiquity.

Whatever opinion may be entertained of the course adopted elsewhere, in prosecuting the study of the Greek and Latin classics; the charge, that in our country it is pursued with excessive solicitude and to an undue extent, cannot be maintained. The tendency in the public mind, at least for a very considerable period, has been to rank this class of studies far below the estimation in which it ought to be held. Hence the ancient languages have been slighted altogether, by numbers; while others have studied them with so little interest, and to so narrow an extent, and in a manner so superficial, that they have derived from them but a moderate share of the advantages which they are capable of yielding. If, then, classical studies are not to be abandoned as worthless, the attention which is bestowed upon them ought to be augmented rather than diminished; and the knowledge of them, which is acquired, should be more critical and thorough. It should be such, as shall invigorate and enlarge the understanding, sharpen the powers of discrimination, chasten the taste, and elevate, refine and ennoble all the faculties of the mind. And such can hardly fail to be the result of an ex-

tended and familiar acquaintance with those authors, in whose works we have transmitted to us the treasured wisdom and genius and taste of antiquity. For, strangely unsusceptible must he be to every genial influence, whose stores of thought shall not be enlarged, whose powers of invention and judgment shall not be roused and strengthened, and whose perceptions of grandeur and beauty shall not be exalted and purified, by familiar converse with those master-spirits, whose writings have, in every age, been the delight and admiration of mankind.

But, by an abandonment of philological pursuits, as a part of a liberal education, and especially by foregoing the study of the noble languages of antiquity, not only will the intellect suffer, as to its general improvement; but one of the most direct and unfailing processes to insure highly cultivated and thorough English scholars will be discarded. One of the readiest and surest means to secure an extended, a discriminating and minute acquaintance with the meaning of words and a masterly command of the wonderful capacities of our mother tongue, is the study of other languages, and pre-eminently of those of Greece and Rome. Aside from all the aid, furnished us by etymology; in the very process of translating, we, of clear and undeniable necessity, are continually busied in comparing the import of words in other languages with equivalent ones in our own; and are thus led to seek, not merely their general sense, but their most nice and indistinct shades of meaning. Thus the connection between the thorough study of the languages of antiquity and the possession of a peculiarly copious vocabulary of English words and of ability to use them with singular discrimination and accuracy, is intimate and obvious.

But, although the study of the Greek and Latin classics is by no means to be omitted, in a course of a liberal education, and although it contributes indispensable aid to the scholar in his efforts to acquire a knowledge and a mastery of the English language; still it is not all which is requisite. Every language has its peculiar forms of expression; its combinations of words and phrases, which are idiomatic and exclusive. Each has also its elegant and its vulgar, its elevated and its groveling terms. Each too has its harmonious and grating, its musical and its harsh expressions; and each has its nervous and emphatical, and its

feeble and tame modes of speech. Sentences, in all languages, can be so constructed, that they shall be compact and smooth, or loose and rough; so that they shall be energetic and impressive, or weak and powerless; and so that they shall be clear and intelligible, or indistinct and equivocal in their meaning. Every language should, therefore, be an object of attentive study and of careful and assiduous cultivation to those, with whom it is their vernacular tongue.

While, then, other subjects are not to be undervalued and neglected, to impart to those, who are in a course of literary training, a thorough acquaintance with whatever has relation to their native speech, the principles of correct grammatical construction, the readiest and most certain means of arriving at a discriminating view of the exact meaning of words, so as to avoid the employment of terms as synonymous, which are not such, and, of course, a loose, ambiguous and tautological phraseology, and the rules, which must be observed in the formation of sentences, that we may secure the grand ends, which ought to be aimed at by every writer, clearness, vigor and impressiveness, with as high a degree of ease, harmony and gracefulness, as is compatible with those nobler and more valuable objects, should ever be kept in view, and assiduously and faithfully pursued. The characteristics of elegant composition and the rules of rhetoric, which must be adhered to, that we may arrive at distinguished excellence, ought to be fully and accurately exhibited, and they should be illustrated and enforced by appropriate examples, suited to evince the valuable results of a knowledge of the principles of fine writing and of respect for them, and the mischievous and even fatal consequences of ignorance and contempt. The seminary of learning, then, which is not furnished with facilities for imparting adequate instruction on this subject, is essentially deficient in the means, which it possesses, of doing justice to those, with whose education and welfare it is intrusted.

In no case, has a more erroneous position been advanced, than is taken in the shallow pretence, which is sometimes avowed, that rhetorical studies must be worthless, because they are concerned only about words. The connection between words and things, between language and thoughts is intimate and inseparable. Hence with little, or no exaggeration, it may be affirmed, that words are things, and things words. So close and so nearly indissoluble is the connection between our thoughts and words, that

it is not saying too much to assert, that we think in words. A man's conceptions are, to his own understanding, indistinct and intangible, till he has clothed them in language. At any rate, it must be admitted on all hands, that words are the types of thought. Dull, then, or heedless indeed must be that mind, by which they can be studied and accumulated, without some reference to the sentiments and emotions, which they express, and which they are designed to display and communicate.

In another view, it must be apparent, that an attention to words, that cultivating an acquaintance with language is not open to the charge of insignificance, with which it is sometimes aspersed; and that the scorn, with which it is visited, and the sneers, which are lavished upon it, are wholly undeserved. Language is the only medium, by which we can clearly and fully convey to others the views and feelings of our own minds. As the vehicle of our conceptions and sentiments, as the channel, through which to communicate to others the emotions of our own souls, and as the means of exerting a powerful and an efficient influence over the minds of men; acquiring such a command of language, that he shall be able to clothe his thoughts in the happiest phraseology, to exhibit with perfect clearness the truths, which he would unfold and to set home effectually on the understanding and the heart, the principles, which he would inculcate and the motives, which he would enforce, must be an object well worth the ardent wishes and the strenuous and untiring pursuit of every man of letters; of every one, who aims and desires to affect and control the opinions and conduct of others, either by his voice, or from the press. Where is the ground of difference between the style of one man and that of another to be sought? It may depend, to a high degree, upon his manner of thinking, upon the clearness of his views, and upon the vivacity and spirit, which characterize his conceptions. But, after all it is, to a large extent at least, to be found in the words, which he employs, and in the arrangement and connection, which he imparts to them. How often has every one of us, at all qualified for the task, perceived a sentiment, just and striking in itself, rendered frigid and powerless, by the tame and feeble language, in which it was conveyed? And how often do we hear public speakers, who, to say the least, are as much embarrassed from the want of appropriate terms, by which to express their thoughts, and by not possessing the power of a skillful and fitting combination of their words in

sentences, as by any other causes? To him, then, who aims to interest and instruct and persuade by the labors of the pen; or who hopes to be able to enlighten, convince, animate and control by the luminous exhibition of truth, and the power of an elevated, a nervous and touching eloquence, the study of the English language, and the attainment of finished excellence in the use of the noble and powerful diction, which that language furnishes, may well be exhibited as an object, which should claim his morning thoughts and his evening toils.

There are opposite errors, into which different individuals are betrayed with reference to the style, which it is expedient for them to adopt. Some appear to suppose, that, in order to be forcible and effective, they must not only use language, characterized by great plainness; but even descend to expressions, low and vulgar, and such as must create disgust in every mind of cultivation and taste. Others seem to imagine, that to employ words of adequate dignity and force to render themselves interesting and impressive, they must be ever on stilts; that they must express themselves, not in ordinary and simple terms, but in a peculiar and lofty phraseology, or in a strain of unnatural inversion, or of inflated and tedious circumlocution. Now, it is a sad mistake for any one to believe, that he shall be more nervous and pithy, if he introduces low and unseemly terms, and such as must be odious and revolting to all, who possess even a moderate share of refinement and delicacy. Coarseness and vulgarity are not strength and efficiency, nor are they necessary to that vigor and directness of address, which reaches the understandings and the hearts of men. No one of the principles of propriety need be disregarded, nor any of the canons of taste violated, and still a style, distinguished, in the highest degree, for energy and impressiveness, may be secured. That an empty parade of words constitutes fine writing, is an error, which carries its own antidote along with it, and will not, therefore, be likely, in any particular case, to be long, or extensively prevalent. Those efforts, which are merely pompous nihilities, and which, while they "amaze the unlearned, make the learned smile," are sure to have a just estimate soon affixed to them. Their emptiness will be certain to be discovered, and they will sink into merited insignificance and neglect. To secure enduring admiration and celebrity, valuable thought, clothed in the most appropriate and expressive phraseology, is indispensable.

On few points respecting style, are writers, and especially young ones, more frequently and more grossly mistaken, than in adopting the opinion, that a copious use of figures is a needful and crowning excellence. Hence, figurative language of all kinds and of every degree, is eagerly sought and profusely employed. But, style, decked in finery of this sort, will no more approve itself to competent judges, than tawdry decorations in dress will be deemed real elegance by persons of taste. A discourse may be written and delivered, in which there shall not be found a single figure, except the simplest metaphors and instances of personification in its humblest forms; and yet the defect shall never be perceived nor mentioned, and the interest, which is secured, shall be of the deepest character and unfailing to the last. And it shall achieve all this, simply because impressive and valuable thought is embodied in correct, manly and nervous language, arranged in well-constructed, perspicuous and forcible sentences. On the other hand, puerile conceptions, set off with all the fopperies of style and bespangled with an accumulation of brilliant figures, will not only fail to awaken interest, but will provoke pity and derision. While, however, I thus present a caution against an undue estimate of the importance of figurative language and against hunting after tropes and metaphors and comparisons with constant wakefulness and assiduity, as the main things to be valued and sought; and while I would earnestly admonish of the danger, to which he subjects himself, who hopes to impress the mind, to reach the heart and to secure admiration and influence by strong personifications and the boldest apostrophes, I am far from an indiscriminate and unqualified proscription of figures. When the offspring of genius and feeling, and of a character suited to the subject, and when employed on appropriate occasions and by one, who has skill to use them in accordance with the rules of propriety and taste, a charm attends them, which is felt by every mind, and they serve not only as means of embellishment, but answer the higher purpose of affecting the understanding, touching the springs of action and controlling the conduct. My aim, in my remarks on this subject, is merely to enforce the important truths, that without figures a man may write well, and that, by a fond desire and an eager pursuit of such decorations, the attention will be likely to be turned aside to mere ornament, to the disregard of qualities more valuable and effective.

An incidental advantage resulting from an attention to style,

and one which ought not to be passed by unnoticed, is its influence on the general improvement of the mind. In all efforts at writing, even if undertaken with an immediate and well-nigh exclusive reference to the acquisition of an eligible manner, the mind is inevitably taught to think, to discriminate and to judge. By the necessity, under which every one, who writes, whatever may be his object, is laid, of having ideas to exhibit, and, if he would express them with clearness and energy, of having his views distinct, definite and vivid, his powers of invention and judgment, of continuous and discriminating thought, and of strong and spirited conception, will be called into action and be quickened, invigorated and matured. Hence, with a view solely to general mental improvement, one of the most successful courses of exertion, is the practice of composing, though entered upon merely for the purpose of acquiring such a style, as is worth being coveted and sought.

That our native tongue possesses excellences, which render it worthy of the most strenuous efforts for its cultivation, and for attaining skill to wield with readiness and effect its various and admirable powers, few, if any, will be inclined to deny. I have no fear of contradiction, when I aver, that it is a language, which, in richness and compass, in variety and precision, and in expressiveness and force, is second to none, either ancient or modern. It may not equal the Greek in harmony, and it may not admit of the condensation, of which the Latin is susceptible. But, it has various and important points of superiority over either. It may fall behind the mellifluous flow of the Italian; and for the purposes of ordinary conversation; as the medium of merely idle or amusing chit-chat, it may not have the ease and grace of the French. But, it rises far above them in majesty and strength; and, for all the higher objects, for which language is employed, it is entitled to an undeniable and glorious pre-eminence. Who can call to mind the sublimity and force and, at times, the pathos and terseness and nature of Shakspeare; the grandeur and exuberance of Milton; the elegance and polish and severity of Pope; the gracefulness and ease of Addison; the dignity and strength of Johnson and Burke; the vehemence of Chatham and Junius; and the thrilling eloquence of Erskine and Curran, and not have feelings of exultation and joy rise within him at the recollection, that the language of these and other master-spirits of our literature "is his mother tongue." Hexameter verse cannot, indeed,

be written in English; but I know of no other form, either of prose or verse, in which all subjects, "from grave to gay, from lively to severe," may not be successfully handled in our language.

But, while our language is distinguished by such excellences, and while it abounds in writers, who, in various respects, possess such high merits, and who have done so much honor to their country and their race, the student needs, and urgently too, directions and cautions in his perusal of our prominent and standard authors. As it regards some, he must be put upon his guard against receiving, without hesitation and without reserve, their facts and their opinions. In other instances, he will be liable to be misled, not so much by the undisguised exhibition of error and by direct attempts to beguile, as by silence with regard to important and even vital truths, and by throwing into the shade, or leaving utterly out of sight the sentiments, which should be inculcated upon the mind and foregoing all attempts to infuse the spirit, which should be breathed into the heart. In other cases, he will need be put upon his guard against being seduced into a preposterous admiration and a servile copying of the meretricious ornaments and fictitious graces of style. For, not unfrequently are writers applauded and imitated, as distinguished by genuine and peculiar beauties, whom a correct taste would teach all to pity and scorn, as affected, ostentatious and worthless. I know of no prominent historian, whose work was composed under the influence of decidedly christian views and which is imbued with a thoroughly christian spirit. Even Robertson, standing, as he did, at the head of the Scottish church, carried to the tasks, which he undertook, the principles and feelings of a man of the world; and his historical works are secularized and debased by the absence of high reverence for christian truth and the want of affections, warm with regard for the prosperity of religion and the moral and spiritual interests of men. While, in many respects, slight reliance can be placed upon their statements of facts, and while the impressions, which they frequently endeavor to make by insinuation and innuendo, are unfounded and noxious, we do no injustice to Hume and Gibbon, in pronouncing them both, and especially the latter, peculiarly dangerous to the principles and morals of the young. Both, and pre-eminently Gibbon, are suited to spread around them a moral pestilence. Of English essayists, I am acquainted with none, unless at times Johnson forms a noble exception, whose pages are not fraught with sentiments and a spirit decidedly opposed to the

gospel of Christ, or, if not directly at variance with it, at least widely alien from it, and distinguished by no nobler views and by no purer principles, than might be successfully sought in the works of Plato or Xenophon, or in the productions of Seneca or Epictetus. The whole current of thought, which is pursued in them, and the entire impression, which they are adapted to create, is undeniably unevangelical. Among the poets of high and established reputation, with the exception of Milton, who possesses a peculiar character and occupies a peculiar station, but two, Young and Cowper, give prominence to the distinguishing truths of christianity, breathe in their writings a strictly christian spirit and urge the performance of purely christian duties. It will be observed, that I speak of poets of *high* and *established* reputation. There are those, whose claims to respect and distinction are of a subordinate character, whose works evince the most decided deference for the truths of religion, and are marked by an ardent desire and correspondent endeavors to promote its interests. Among those belonging to this class, Watts, Heber, Montgomery and Pollok may be enumerated. There are others, whose standing is a subject yet undecided. On the question of their merits and of their title to celebrity, the public has yet to pass; since, while admired and lauded by some, they are with others, if not objects of contempt, at least held unworthy of a place by the side of those, most distinguished for poetic excellence. There is a numerous class, to be sure, who never meant to allow in their works a place to any thing hostile to religion or morals, whose views still seem never to have risen higher than awakening interest and imparting pleasure, or securing applause and profit; while, on the grand point of the moral and religious influence of their writings, the ground, which they occupied, is, with most, little, if at all, better than that of heartless neutrality. But, the mass pander to the evil passions and the licentious inclinations of men; and slight would be the danger to the christian principles, and to the purity of mind and the moral habits of the young, from all, which heathen "minstrels ever said or sung;" compared with the mischievous influence, which those, who have written in our own language are fitted to exert, beginning no farther back than Dryden, whose poverty and profligacy led him, regardless of decency and conscience, to minister to the vices of a most dissolute age, and coming down to the debauched and reprobate Byron, whose works are suited to prepare men to think and feel like fiends, and,

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with the brute, to wallow in the sty. Of the works of fiction, the mass are the merest trash, fit only to be allowed to pass unimpeded to that oblivion, to which they are so soon destined. Very many authors, in this field of literature, write seemingly without any valuable purpose; or, at the best, only labor, by some trite moral at the close, to quench the fire of passion, which they have been kindling, in the progress of their work. But, there are others, who seem eagerly bent on sowing the seeds of corruption and preparing the way for a harvest of crime and wretchedness. They are all alike calculated to produce, in a greater or less degree, an intoxication of mind, disqualifying for vigorous effort and high improvement, as well as unfitting for the serious and more important duties and for the severer trials of life. From the charge of an influence of this kind, even the best are not altogether exempt. Since, then, those, whose works are adapted to subserve, in some respects, valuable purposes, are in others mischievous, and since they are so few in number and occupy in the class of writers to which they belong so subordinate a place, they ought not to arrest the sweeping sentence of condemnation, in which I am prepared to involve the whole.

To examine these different classes of writings and to exhibit the peculiar traits, as it regards their excellences and defects, of prominent works in each; and to furnish, as far as may be practicable, security to the youthful mind against adopting erroneous views and imbibing an unchristian spirit and being seduced from truth and duty, from happiness and heaven, must be an object of high and inestimable value.

On the subject of education, the time allotted me, will only allow me to say, that, while, without a question, rules may be laid down and directions given, which shall materially assist the teacher in imparting instruction; and while improvements and extensive improvements in the intellectual training of our youth are practicable and important; still a melioration in the course of moral discipline in our schools, is of far higher moment. It is of slight importance to teach the rudiments of letters and to expand and invigorate the intellect, compared with teaching the grand truths of virtue and piety, and establishing in the mind such principles and insuring in the heart such affections, that conscience and duty shall be reverenced and obeyed, and meanness and mischief, vice and sin be loathed and scorned, feared and shunned.

From this brief delineation of its objects, it may be distinctly seen, that the station, which I am called to occupy, is one of no trivial importance and of no ordinary responsibility. If its duties shall be faithfully and successfully fulfilled, an influence will be exerted, of a most beneficent character on all the interests of the youth, on whom it shall be made to act; beneficent as it regards the intellect and the heart, beneficent as it regards their respectability and their usefulness, and beneficent as it regards their happiness and their salvation.